

Claims

1. An arrangement for recirculation of exhaust gases in a supercharged combustion engine (1) whereby the arrangement comprises an exhaust line (3) intended to lead exhaust gases out from the combustion engine (1), an inlet line (6) intended to lead air at above atmospheric pressure to the combustion engine (1), a return line (8) which comprises a connection to the exhaust line (3) and a connection to the inlet line (6), so that via the return line (8) it is possible to recirculate exhaust gases from the exhaust line (3) to the inlet line (6), characterised in that the arrangement comprises a first cooler (10) incorporated in the return line (8) for cooling the exhaust gases in the return line (8) before they are mixed with the air in the inlet line (6), whereby the exhaust gases in the first cooler (10) are cooled by a first medium which is at a temperature substantially corresponding to the temperature of the surroundings.
- 15 2. An arrangement according to claim 1, characterised in that said first medium is ambient air.
3. An arrangement according to claim 1 or 2, characterised in that the arrangement comprises a second cooler (9) intended to cool the exhaust gases in the return line (8) before they reach the first cooler (10).
4. An arrangement according to claim 3, characterised in that the second cooler (9) is cooled by a liquid medium.
- 25 5. An arrangement according to claim 4, characterised in that the liquid medium is adapted to being circulated in a cooling system which is also adapted to cooling the combustion engine (1).
- 30 6. An arrangement according to any one of the foregoing claims, characterised in that the arrangement comprises a third cooler (7) for cooling the air in the inlet line (6) before it is mixed with the exhaust gases from the return line (8).

7. An arrangement according to claim 6, characterised in that said first cooler (10) and said third cooler (7) are situated close to one another.
8. An arrangement according to claim 7, characterised in that the first cooler (10) and  
5 the third cooler (7) constitute an integrated unit.
9. An arrangement according to claim 7 or 8, characterised in that the first cooler (10) and the third cooler (7) take the form of flat cooler packages which each have a main extent in one plane, whereby the first cooler (10) and the third cooler (7) are situated  
10 relative to one another in such a way that they have an extent in a substantially common plane.
10. An arrangement according to any one of claims 7 to 9, characterised in that the first cooler (10) and the third cooler (7) are situated close to a fourth cooler (15) which  
15 is intended to cool the coolant in a cooling system.